



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/694,706	10/28/2003	Chi Fai Ho	110 Cont3	5206
7590		10/16/2007		
Peter Tong				
1807 Limetree Lane				
Mountain View, CA 94040				
			EXAMINER	
			UTAMA, ROBERT J	
			ART UNIT	PAPER NUMBER
			3714	
			MAIL DATE	DELIVERY MODE
			10/16/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/694,706

Applicant(s)

HO ET AL.

Examiner

Robert J. Utama

Art Unit

3714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 July 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 39-47, 49-51, 56, 57 and 59-71 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 44-51 and 64-70 is/are allowed.
- 6) ☒ Claim(s) 39-43, 56, 57 and 59-63 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 07/30/2007.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

Art Unit: 3714

## **DETAILED ACTION**

### ***Status of the application***

1. This office action is a response to the amendment filed on 07/30/2007. The current status of claim are as follow: Claim 39-42, 44-47, 49-51, 56-57, and 59-71 are still pending. Claims 1-38, 43 and 48 are cancelled. Claims 52-55, 58 are withdrawn from consideration.

### ***Terminal Disclaimer***

2. The terminal disclaimer filed on 07/30/2007 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of 08/13/2016 has been reviewed and is accepted. The terminal disclaimer has been recorded.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 39-40, 43, 59-60 and 62 are rejected under 35 U.S.C. 103(a) as being anticipated by Cook et al US 5,727,950 (hereinafter Cook '950), in view of Perelli US 4,464,121 (hereinafter Perelli).**

**Claim 39-40:** Cook '950 teaches of instructional system that presents study material (e.g.: homework) via a computer (see Cook '950 Abstract). Cook '950 teaches of measuring various factor such as: time between user input (latency) to adjust study material presentation to a specific student (Cook '950 col. 49:25-41). In Cook '950 latency refers to time measurement generated when there is no input even of an expected input type (**Claim 40**) [See Cook '950 table 2c at the top of Col. 52]. The type of input devices used in Cook '950 consist of:

Art Unit: 3714

keyboard, mouse and other pointing device (Cook '950 col20:27-30) [**Claim 39**] The latency information are used in combination with moving average of the previous known information and then used to make a determination of the state of the user (see Cook '950 col. 63:10-25). Once the user's state has been determined the system will adjust the presentation material (see Cook '950 49:36-41). Cook '950 provided a teaching where the study materials have a level of difficulty or content and setting a time period based on the level of difficulty or content of the study material (see Cook '950 Col. 33:45-47 and col. 13:39-49). Cook '950 fail to provides a teaching of presenting a question regarding the user's understanding of the material and if the user's answer is incorrect, adjusting the material to be presented to help the user on the study material. However, the reference Perelli provides a teaching of presenting a question regarding the user's understanding of the material (see Perelli col. 6:45-55) and if the user's answer is incorrect, adjusting the material to be presented to help the user on the study material (see Perelli col. 6:57-67). Therefore, it would have been obvious to one of ordinary skilled in the art to include the feature of presenting a question regarding the user's understanding of the material and if the user's answer is incorrect, adjusting the material to be presented to help the user on the study material, as taught by Perelli, in order to improve student's efficiency in absorbing new study material (see col. 5:45-60).

**Claim 43:** Cook '950 explains that the adjusting the study material is determined by a user's previous interaction (via the use of moving average, error rates and etc) [see Cook '950 col.49:25-30].

**Claim 56:** Cook '950 teaches of instructional system that presents study material (e.g.: homework) via a computer (see Cook '950 Abstract). The study materials are tagged with certain notations, these notations contain information with regards to the study material such as: difficulties (Cook '950 Col. 51:45-52) and time period based on the difficulty level (see Cook '950 Col. 33:45-47 and col. 13:39-49). Cook '950 teaches of measuring various factor such as: time between user input (latency) to adjust study material presentation to a specific student

Art Unit: 3714

(Cook '950 col. 49:25-41). In Cook '950 latency refers to time measurement generated when there is no input event of an expected input type [See Cook 950 table 2C in the top of Col. 52]. While Cook '950 fails to mention the type of input via a keyboard or position pointing device (**claim 39**), it would be clear from the Cook '950 disclosure of an agent based computer learning system is meant to utilize a myriad of conventional user input device such as: keyboard, mouse, joystick, touch pad and etc. The latency information are used in combination with a moving average of the previous latency information and then used to make a determination of the state of a user (see Cook '950 col. 63:10-25). Once the user's state has been determined the system will adjust the presentation material (see Cook 950 col. 49:36-41). Cook '950 fail to provides a teaching of presenting a question regarding the user's understanding of the material and if the user's answer is incorrect, adjusting the material to be presented to help the user on the study material. However, the reference Perelli provides a teaching of presenting a question regarding the user's understanding of the material (see Perelli col. 6:45-55) and if the user's answer is incorrect, adjusting the material to be presented to help the user on the study material (see Perelli col. 6:57-67). Therefore, it would have been obvious to one of ordinary skilled in the art to include the feature of presenting a question regarding the user's understanding of the material and if the user's answer is incorrect, adjusting the material to be presented to help the user on the study material, as taught by Perelli, in order to improve student's efficiency in absorbing new study material (see col. 5:45-60).

**Claim 57:** Cook '950 teaches that the amount of time used for the adaptation process is a function of the response time of the user. The algorithm used to define a reference user response time can be done using an average of past user response time (see Cook '950 col. 63:10-25).

**Claim 59:** Cook '950 teaches of instructional system that presents study materials (e.g: homework) via a computer (see Cook '950 Abstract). Cook '950 teaches of measuring various fact such as: time between user input (latency) to adjust study material presentation to a

Art Unit: 3714

specific student (Cook '950 col. 49:25-41). The type of input devices used in Cook '950 consists of: keyboard, mouse and other pointing device (Cook '950 col20: 27-30). The latency information are used in combination with a moving average of the previous latency information and then used to make a determination of the state of a user (see Cook '950 Col. 63:10-25). Once the user's state has been determined the system will adjust the presentation material (see Cook '950 col. 49:36-41). Cook '950 provided a teaching where the study materials have a level of difficulty or content and setting a time period based on the level of difficulty or content of the study material (see Cook '950 Col. 33:45-47 and col. 13:39-49).

**Claim 60:** Cook '950 explains that adjusting the study material is determined by a user previous interaction (the use of moving average, error rates and/or use of hints) [see Cook '950 col.49: 25-30], which are all independent of the content of the response.

**Claim 62:** Cook '950 teaches that several performance metrics (such as: time latency) can be used to adjust the time pacing of the presentation (Cook '950 col. 63:7-25).

**5. Claims 41-42 are rejected under 35 U.S.C 103(a) as being unpatentable over Cook et al US 5,727,950 (hereinafter Cook '950), further in view of Gevins et al US 5,724,987 (hereinafter Gevins '987).**

**Claim 41 and 42:** Cook '950 fails to provide a teaching where adjusting the study materials comprises of adjusting the audio (**claim 41**) and visual effect (**claim 42**). Gervins '987 teaches of adjusting the distribution of teaching via the auditory or visual modalities (Gervins '987 Col. 6:11-17). Therefore, it would have been obvious to further modify Cook '950 with the teaching of adapting the distribution between auditory and visual modalities of the presentation of the teaching material. One of ordinary skilled in the art would have been motivated to make this combination since it would maintain the user at an optimal level of attention and comprehension (Gevins '987 Col. 4:25-30).

Art Unit: 3714

**6. Claim 61 and 63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cook et al US 5,727,950 (hereinafter Cook '950) and further in view of Collins et al US 5,437,553 (hereinafter Collins '553).**

**Claim 61:** Cook '950 fails to provide a teaching where adjusting the study material comprises of presenting a question to the user. Collins '553 teaches of adjusting a study material by asking the user whether or not he wants to continue with the learning material. If the user answer with "yes" he will be shown a new learning material; on the other hand, if the user answer with "no" he will be shown a game in order to reclaim his attention span (see Collins '553 Col. 6:10-36 and FIG 4. item 144). Therefore, it would have been obvious at the time of the invention to modify Cook '950 with the teaching of presenting an option to proceed with another learning material or a game. One of ordinary skilled in the art would have been motivated to make this combination since it would allow the student to have the option to alleviate boredom if needed (see Collins '553 Col.6:24-32).

**Claim 63:** Cook '950 fails to provide a teaching on adjusting the study material by switching to different set of study material. Collins '553 teaches of providing the user with the options of getting a new set of study material (Col. 6:30-35). Therefore, it would have been obvious at the time of the invention to modify Cook '950 with the teaching of presenting a new study material in a learning environment. One of the ordinary skilled in the art would have been motivated to make this combination since it would help alleviate boredom during the use of a learning system (see Collins '553 Col. 6:24-32).

#### ***Allowable Subject Matter***

7. Claims are 44-47, 49-51 and 64-70 allowed. The following is a statement of reasons for the indication of allowable subject matter: Prior art fails to provide teaching for the limitation of upon failure of receiving an input to the first window of the computer within a specified time period when there are one or more inputs by the user to the second window during the time

Art Unit: 3714

period adjusting the study material for the presentation on the subject to attempt to improve the user concentration in learning.

### **Conclusion**

8. Applicant's arguments with respect to claim 39-41, 56-57 and 59-63 have been considered but are moot in view of the new ground(s) of rejection.

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert J. Utama whose telephone number is (571) 272-1676. The examiner can normally be reached on M-F 9:00-5:30.

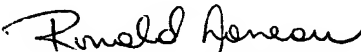
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pezutto can be reached on (571)272-6996. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Art Unit: 3714

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

RU

  
RONALD LANEAU  
PRIMARY EXAMINER

10/10/07